

# TEST REPORT

FCC MPE Test for GCM6201NA  
Certification

**APPLICANT**  
GCT SEMICONDUCTOR, INC

**REPORT NO.**  
HCT-RF-2410-FC001-R2

**DATE OF ISSUE**  
December 13, 2024

**Tested by**  
Jae Ryang Do



**Technical Manager**  
Jong Seok Lee



**HCT CO., LTD.**  
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BongJai Huh / CEO

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**Applicant****GCT SEMICONDUCTOR, INC**

11F Construction Financial Building 15, Boramae-ro 5-gil, Dongjak-gu, Seoul,  
07071, South Korea

**Product Name**

LTE Module

**Model Name**

GCM6201NA

**Date of Test**

August 19, 2024 ~ September 27, 2024

**Location of Test**

☒ Permanent Testing Lab ☐ On Site Testing

(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)

**FCC ID**

2ALIY-GCM6201NA

**FCC Classification:**

Licensed Non-Broadcast Station Transmitter (TNB)

**Test Standard Used**

FCC Rule Part(s) : § 1.1310, 2.1091

**Test Results**

PASS

## REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	October 2, 2024	Initial Release
1	December 12, 2024	Added the NTN B255 result.
2	December 13, 2024	Revised the LTE B24 result.

## Notice

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### Content

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The measurements shown in this report were made in accordance with the procedures specified in CFR47 section § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S.C. 853(a)

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked \*.

Information provided by the applicant is marked \*\*.

Test results provided by external providers are marked \*\*\*.

When confirmation of authenticity of this test report is required, please contact [www.hct.co.kr](http://www.hct.co.kr)

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

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## RF Exposure Statement

### 1. Limit

According to § 1.1310, § 2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
0.3 - 1.34.....	614	1.63	#(100)	30
1.34 - 30.....	824/f	2.19/f	#(180/ f <sup>2</sup> )	30
30 - 300.....	27.5	0.073	0.2	30
300 - 1500.....	.....	.....	f/1500	30
1500 - 100.000.....	.....	.....	1.0	30

F = frequency in MHz

# = Plane-wave equivalent power density

### 2. Maximum Permissible Exposure Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = Power density

P = Power input to antenna

G = Power gain to the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

### 3. RESULTS

#### - LTE B24 -

Max output power at antenna input terminal	19.70	dBm
Max output power at antenna input terminal	93.33	mW
Prediction distance	20.00	cm
Prediction frequency	1627.5~1656.5	MHz
Antenna gain (typical)	4.00	dBi
Antenna gain (numeric)	2.512	-
Power density at prediction frequency (S)	0.0466	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

#### - LTE B54-

Max output power at antenna input terminal	25.70	dBm
Max output power at antenna input terminal	371.54	mW
Prediction distance	20.00	cm
Prediction frequency	1670.0~1675.0	MHz
Antenna gain (typical)	4.00	dBi
Antenna gain (numeric)	2.512	-
Power density at prediction frequency (S)	0.1857	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>

- NTN B255-

Max output power at antenna input terminal	25.70	dBm
Max output power at antenna input terminal	371.54	mW
Prediction distance	20.00	cm
Prediction frequency	1626.5~1660.5	MHz
Antenna gain (typical)	4.00	dBi
Antenna gain (numeric)	2.512	-
Power density at prediction frequency (S)	0.1857	mW/cm <sup>2</sup>
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm <sup>2</sup>